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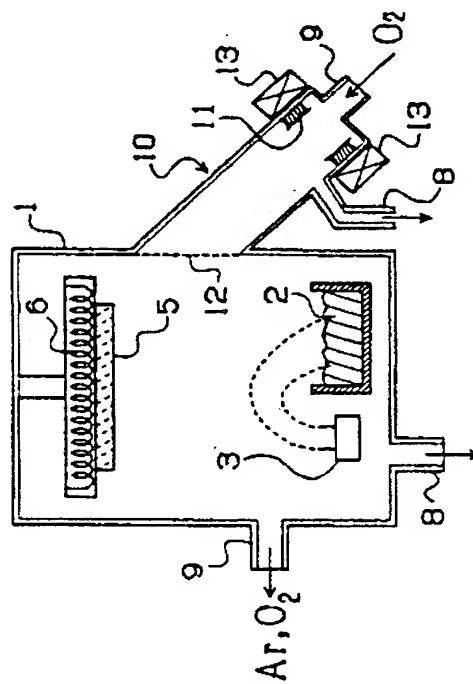
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TITLE : MANUFACTURE OF COMPOUND  
 OXIDE SUPERCONDUCTOR THIN  
 FILM



**ABSTRACT :** PURPOSE: To obtain a compound oxide superconductor thin film having a high superconducting critical temperature and a uniform composition by carrying out physical vacuum evaporation while radiating an oxygen ion beam to a base to a base plate where evaporated particles accumulate.

**CONSTITUTION:** An equipment in used mainly comprises a chamber 1 and a vacuum evaporation source 2 arranged in the chamber 1, an electron gun 3 to add induction heating to the vacuum evaporation source 2 and a base plate 5 installed opposite to the vacuum evaporation source 2 to form a thin film on its surface. By making compound oxide the vacuum evaporation source 2 and carrying out physical vacuum evaporation while radiating an oxygen ion beam, a compound oxide superconductor thin film is made. But preferably, the radiation of the oxygen ion beam is carried out preferably by changing the intensity of the beam. A thin film made of a compound oxide superconductive material having a uniform composition and organization with a high critical temperature can be obtained by the process.

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